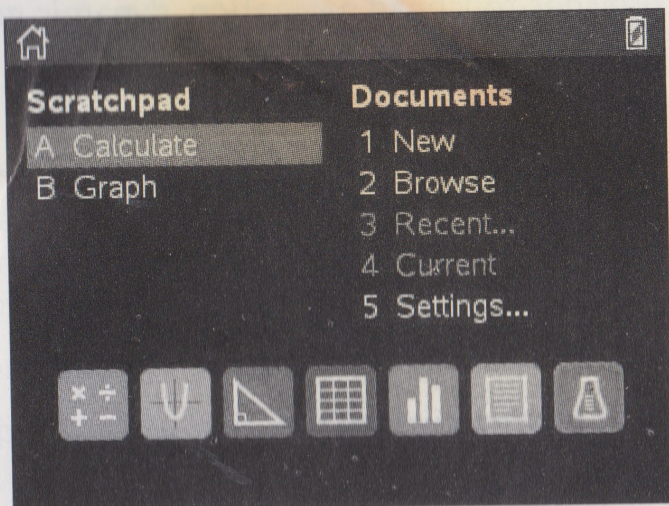


TI-Nspire™ CX II Handhelds



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**TEXAS
INSTRUMENTS**

TI-Nspire™ CX II Handheld Quick Start

Featuring a backlit colour display, the TI-Nspire™ CX II handheld provides touchpad navigation, dynamic graphing and interactive computer features.

About CAS

TI-Nspire™ CAS (Computer Algebra System) technology makes it possible to recognise, simplify and calculate maths expressions, preserving the symbols including variables and terms such as “e” and π . With CAS, you can:

- Perform both symbolic and numeric calculations.
- Factor and expand expressions, and solve for equations and inequalities.

Initial Start-up

The TI-Nspire™ handhelds come equipped with a Li-ion rechargeable battery. Charge the battery for at least four hours to ensure optimum performance.

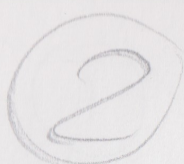
To maximise battery life, this handheld is shipped in Deep Sleep mode. To wake the handheld, press  on for at least 4 seconds or apply USB (computer or wall adapter) or Docking Station power. To put the handheld in Deep Sleep mode during extended storage periods, press and hold down the reset button on the back of the handheld for at least 4 seconds.

Charging the Battery

Use one of the following options to charge the battery:

- Connect the handheld to a computer using USB computer cable. If the driver is not found when the handheld is connected, go to education.ti.com/software to download and install software that includes a driver.
- Connect to a wall outlet using a TI wall adapter. (Sold separately in Europe and Asia.)
- Place the handheld in a TI-Nspire™ CX Docking Station or TI-Nspire™ Docking Station.

CAUTION: Do not expose battery to temperatures above 140°F (60°C). Do not disassemble or mistreat battery. Replace only with a TI approved battery. See owner's manual for additional safety instructions.



Turning on the TI-Nspire™ Handheld

After charging the battery, press  to turn the handheld on. A progress bar is displayed while the operating system loads.

To turn the handheld off, press  . The settings and memory are retained.

Choosing a Preferred Language

During initial start-up, you are prompted to choose a preferred language. If a language is already selected, press   to open the **Change Language** dialogue box, and then complete the following steps.

1. Press  to open the drop-down list.
2. Press  to highlight a language, and then press  or  to select it.
3. Press  to highlight the **OK** button, and then press  or  to save the language selection.

Choosing a Font Size

Next, you are prompted to choose a font size. If you don't see this prompt, press   to access the **Handheld Setup** dialogue box where you can change the **Font Size** setting.

1. Press  to open the drop-down menu.
2. Press  to highlight a size, and then press  or  to select it.
3. Press  to highlight the **OK** button, and then press  or  to save the **Font Size** selection.

Automatic Power Down™ (APD™)

By default, APD™ turns the handheld off after three minutes of inactivity. When this happens, press  to turn the handheld on and return to the Home screen. To change the default setting, press   from the Home Screen to access the **Handheld Setup** dialogue box where you can change the **Power Standby** setting.

Adjusting the Brightness of the Backlighting

The screen is backlit making it easier to use in all lighting conditions. By default, the brightness setting is medium.

- To dim the display, press and hold  and then tap .
- To brighten the display, press and hold  and then tap .

TI-Nspire™ CX II Handheld Keys

CX II Touchpad

Use the centre area as you would a laptop touchpad by swiping your finger across the Touchpad. Press the outer edges to use as right, left, up, and down arrows.

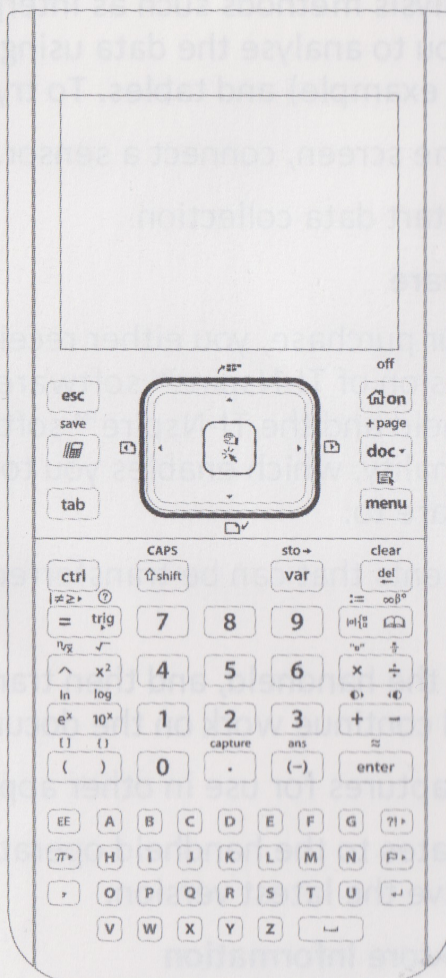
esc Closes menus or dialogue boxes. Also stops a calculation in progress.

save Opens Scratchpad for performing quick calculations.

tab Moves to the next entry field.

↑shift Makes the next character typed upper-case.

ctrl Provides access to the function or character shown above each key.



on Turns on the handheld. If the handheld is on, press this key to access the Home screen.

doc Opens the Document menu.

menu Opens the application or context menu.

del Deletes the previous character.

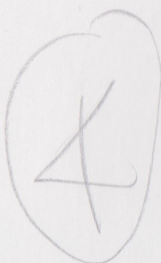
var Displays stored variables.

enter Evaluates an expression, executes an instruction, or selects a menu item.

To select an item, press **enter**.

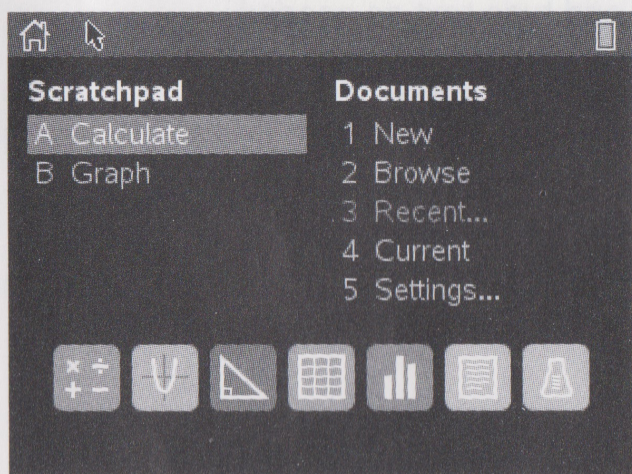
To grab an item, press and hold **ctrl** or press **ctrl** **enter**.

A **▶** symbol on a key indicates access to multiple options. To access an option, press **▶** repeatedly or use the arrow keys on the Touchpad. Press **enter** or **enter** to select the option.



Exploring the Home Screen

The Home screen opens when the handheld is turned on. To return to the Home screen from any other location, press  on.



Settings and Status

- Press the arrows on the Touchpad (◀, ▶, ▲ or ▼) or press  to move among the options on the Home screen.
- By default, the cursor is not active. Swipe the Touchpad to activate the cursor.
- Move the mouse pointer over each option to view a brief description.
- Press Touchpad to highlight the application icons or the Scratchpad or Documents menu options.
- Press  or  to select a highlighted option, or press the number associated with the option.

Settings and Status

Select **Settings** to access options for:

- Changing your language.
- Changing Document settings.
- Setting up the handheld.
- Checking battery and handheld status.
- Logging into class.
- Setting up Wireless Network.
- TI-Innovator™ Hub.
- Restoring Factory Defaults.

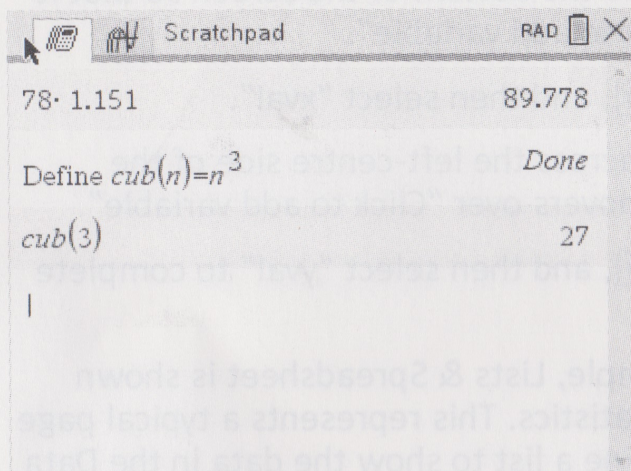
Using Scratchpad

Use Scratchpad to quickly perform calculations and graphing without affecting a document or saving work. Open Scratchpad, perform the calculation, then discard it or save the work as a TI-Nspire™ document.

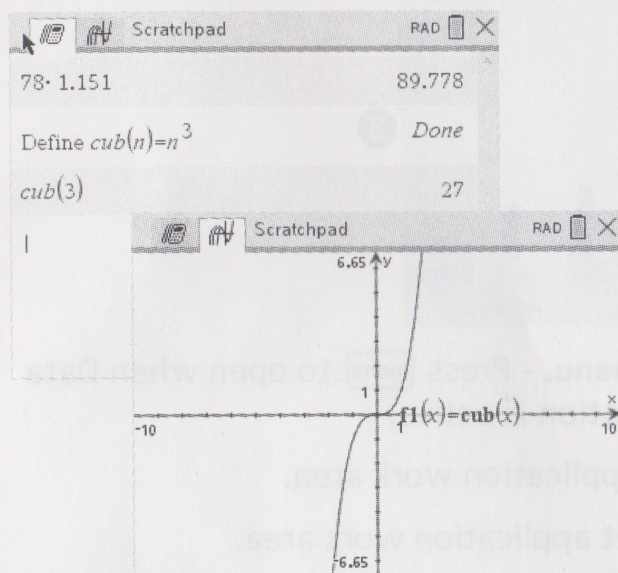
Opening Scratchpad

From the Home screen, press .

The first time you open Scratchpad, a blank page opens with the Calculator application active.



Press  to toggle between the Calculator and Graphs applications.



Clearing Scratchpad

Press , and then select **Clear Scratchpad**.

Closing Scratchpad

Press  to close Scratchpad.

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Working with Applications

On the TI-Nspire™ handhelds, applications are used to perform calculations and graphing. When working with applications, work is performed on a page within a document.

Accessing Menus

When an application is active, press **menu** to access options for working with the application. Press **ctrl** **menu** to access options specific to the current cursor location. For example, pressing **ctrl** **menu** within a cell in a table provides access to actions you can perform on that cell.

Calculator

Use this application to add a page to a document for entering and evaluating maths expressions. To try it:

1. From the Home screen, select New Document or press **1** to create a document.
2. Press **enter** to add a page with the Calculator application active.
3. Type **2** **^** **8** **▶** **×** **4** **3** **÷** **1** **2**, and then press **enter** to see the answer.

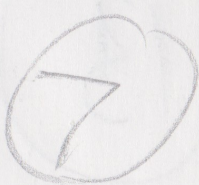
$$\frac{2^{8 \cdot 43}}{12} \qquad \frac{2752}{3}$$

To force a decimal approximate result:

- Press **ctrl** **enter** instead of **enter** in the previous example.

$$\frac{2^{8 \cdot 43}}{12} \qquad 917.333$$

Reusing a previous expression or result - You can copy an expression, sub-expression or result from the Calculator history and paste it into the entry line or other TI-Nspire™ applications.



Working with Documents

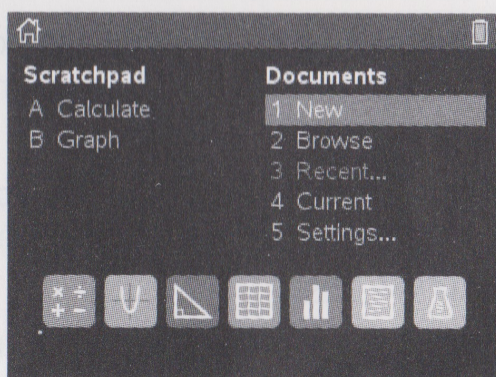
All work performed on the handheld is contained in one or more TI-Nspire™ documents, which can be shared with other handheld users and those using TI-Nspire™ computer software. Each document is divided into at least one, and up to 30, problems.

Creating a New Document

To begin working with TI-Nspire™ applications:

1. Press **1**.
—or—
press **ctrl** **N**.
2. Select an application to add a page to the document.

The selected application is active.



Refer to the following table for information about the options for working with documents.

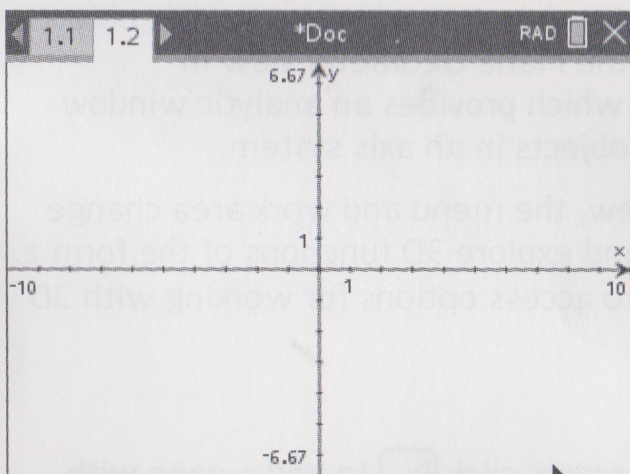
New Document	Opens a new TI-Nspire™ document with the selected application active.
My Documents	Opens the file browser to provide access to existing folders and TI-Nspire™ documents
Recent	Lists the five most recently saved documents.
Current	Goes to the document that is currently open. If a document is not open, this icon is not available.
Settings	Provides access to information about the handheld settings and battery status.

Note: You can also use **on** to tab between the **Home Screen** and **Current** document.



The TI-Nspire™ Document Screen

When you are working in a document on a handheld, icons at the top of the screen provide information about the status of handheld operations and provide an easy way to change settings. The icons are described below.



	Pagescrolling arrows. Use the touchpad to click these arrows and scroll through the pages in a document.
	Page tab. Labels the problem number and page number of the active page. For example, a label of 1.2 identifies Problem 1 , Page 2 . If problems are named, hover the pointer over a tab to view the page name.
*Doc	Document name. Shows the current document name. An asterisk by the document name indicates changes were made since the document was last saved. Click the name to open the Documents menu.
	Press to Test. Indicates that the handheld is in Press-to-Test mode.
	Login status. Shows whether the handheld is searching for an access point (blinking), found an access point (solid), not communicating, connected and ready to log in (a blinking arrow), or logged in and charged (a solid arrow). Click to view Settings & Status .
CAPS	Shows status of the Shift , ctrl , and CAPS keys.
RAD	Angle Mode. Shows an abbreviation of the angle mode (Degrees, Radians or Gradians) in effect. Hover the pointer over the indicator to see the full name. Click to switch between Degrees and Radians.
	Settings & Status. Shows an indicator of the current charge level of the battery. Hover the pointer over the indicator to read the status as a percentage.



Geometry Application

Use this application to add a page for creating and exploring geometric shapes.

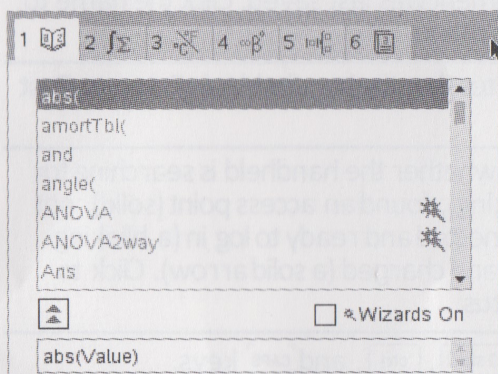
- Use **Plane Geometry** view to explore geometric objects. You can also use the Plane Geometry view in modelling mode, which provides an analytic window for working with objects in an axis system.
- In **3D Graphing** view, the menu and work area change to let you graph and explore 3D functions of the form $z(x,y)$. Press **menu** to access options for working with 3D graphs.

To draw a shape:

1. From the Home screen, click  to add a page with the application active.
2. Press **menu**, and then press **9** **1** to select Circle.
3. To draw a circle, press  and swipe outwards.

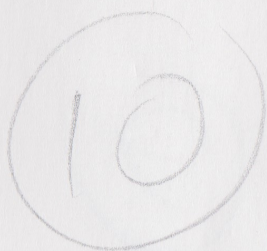
Using the Catalogue

Press  to open the Catalogue.



1. Alpha list of functions and commands
2. Maths functions by category
3. Symbol palette
4. Maths templates
5. LibPub objects

CAS handheld: Contains an additional tab for standard measurement units. (Tab 3).





Lists & Spreadsheet Application

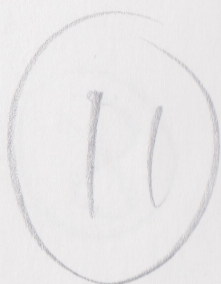
Use the Lists & Spreadsheet application to add a page for working with tabular data. With Lists & Spreadsheets, you can conduct hypothesis tests and display results based on summary statistics definitions or data. It will draw in the Data & Statistics application. To try it:

1. From the Home screen, click  to open a page with the Lists & Spreadsheet application active.
2. Use the arrow keys on the Touchpad to move the cursor to the top cell in column A, and then type *xval* and press .
3. Use the arrow keys or the Touchpad to move the cursor to the top cell in column B, and then type *yval* and press .
4. Type coordinate pairs in columns under the headings to enter data in the spreadsheet.

Entering table data

- For numbers, text, simple maths expressions and formulas, use the corresponding keys on the keypad.
- For more complex maths expressions, press  to open the Catalogue of functions, commands and expression templates.
- To open only the list of templates, press .
- To open only the list of symbols, press  .
- When entering categorical data, enclose the data in quotation marks.

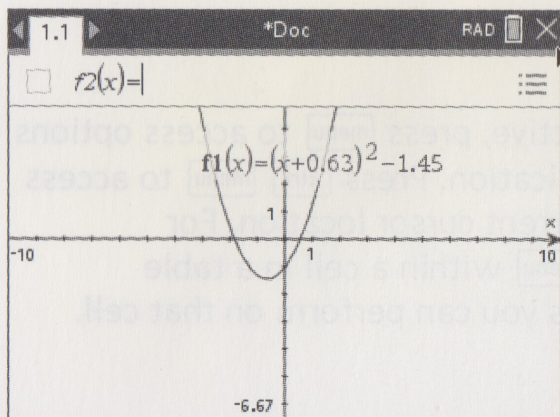
5	"red"					
A5	"red"					





Graphs Application

Use this application to add a page for graphing and exploring functions.



❶ Entry line. Press **[ctrl]** **[G]** to hide or show the entry line.

❷ Work area in Graph view.

When you select a graph or position the mouse over a graphed function, the expression for the corresponding graph is displayed on the work area. Select multiple graphs to display their expressions.

Try graphing $f1(x)=\sin(x)$.

1. From the Home screen, click  to add a page to the document with the Graphs application active.
2. Press **[trig]**, and then press **[enter]** to select the sine function.
3. Type **[X]**, and then press **[enter]** to see the graph.

Navigation

Press **[tab]** to move from a graph to the entry line.

Press **[ctrl]** **[T]** to display Table.

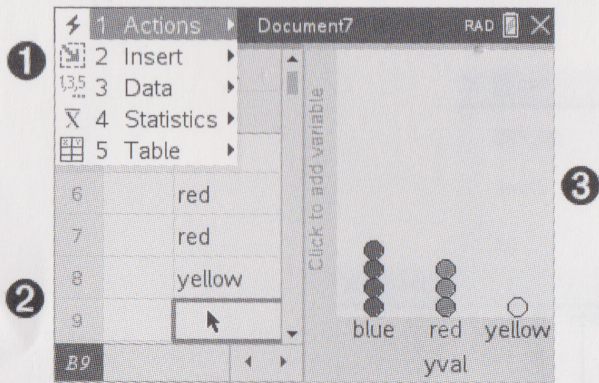
Press **[ctrl]**  to grab. When **(tab)** appears, press **[tab]** to move between objects that are close together.

Data & Statistics Application

The Data & Statistics application provides tools needed to plot Lists & Spreadsheets data as well as tools for manipulating data sets to explore relationships between the data. To try it:

1. From the Home screen, click  to add a page that shows the random points entered in the Lists & Spreadsheets example.
2. Move the cursor to the bottom of the screen so that it hovers over "Click to add variable".
3. Click or press , and then select "xval".
4. Move the cursor across the left-centre side of the screen so that it hovers over "Click to add variable".
5. Click or press , and then select "yval" to complete the scatter plot.

In the following example, Lists & Spreadsheet is shown along with Data & Statistics. This represents a typical page set-up. You must define a list to show the data in the Data & Statistics application.

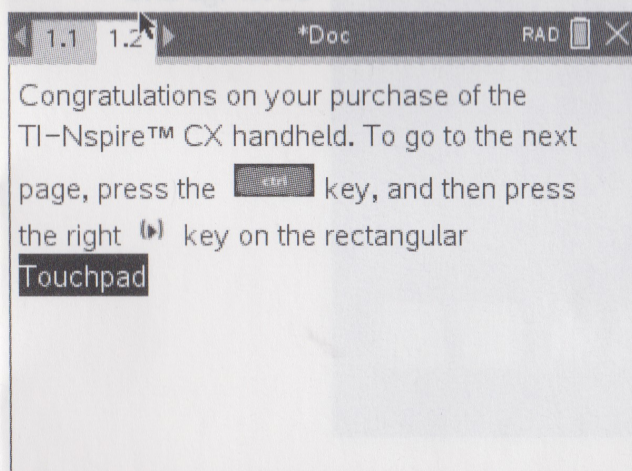


- 1 Data & Statistics menu. - Press to open when Data & Statistics application is active.
- 2 Data & Statistics application work area.
- 3 Lists & Spreadsheet application work area.



Notes Application

The Notes application provides text editing functions for adding text to documents for use as notes or to share with other users. To use Notes, click the Notes icon to add a page to a document and type text as needed.



Maths Expression Boxes

Maths Expression boxes have attributes that enable you to control how expressions are displayed.

To insert a Maths Expression Box, press [ctrl] + [M].

Using an Expression Template

$$\sum_{n=3}^7 n$$

To evaluate: $n=3$

1. Press [math] \left[\begin{smallmatrix} a & b \\ c & d \end{smallmatrix} \right].
2. Select $\left[\begin{smallmatrix} a & b \\ c & d \end{smallmatrix} \right]$ to open the expression box.
3. Use the arrow keys to move the cursor to each position, type the numbers and then press [enter].



Vernier DataQuest™ Application

Use this application to collect, view and analyse real-world data. Using a Vernier EasyLink® cable, you can attach sensors to a handheld and collect data needed to perform experiments. Analysis methods such as interpolate and tangent enable you to analyse the data using meters, graphs (shown in example) and tables. To try it:

1. From the Home screen, connect a sensor.
2. Click  to start data collection.

TI-Nspire™ Software

Depending on your purchase, you either received a trial version or full version of TI-Nspire™ software. The TI-Nspire™ handheld and the TI-Nspire™ software share the same functionality, which enables you to use the TI-Nspire™ software to:

- Create documents that can be transferred to the handheld.
- Start work on the handheld, and then transfer it to a computer and continue work on the document.
- Take screen captures for use in other applications.
- Check for updates to the handheld operating system to ensure you have the latest version.

Where to Go for More Information

For more information, go to education.ti.com. You will find tips for using the handheld and the software as well as links to activities you can download. You can also download the latest guidebook, which provides information about configuring handhelds, working with documents, using the Scratchpad, transferring files and updating the operating system.

Keyboard Shortcuts

Use these keyboard shortcuts to perform common functions.

Editing Text	Navigation
Cut ctrl X	Top of page ctrl 7
Copy ctrl C	End of page ctrl 1
Paste ctrl V	Page up ctrl 9
Undo ctrl Z	Page down ctrl 3
Redo ctrl Y	Document menu doc ▾
Include accent ⌘	Context menu menu
Inserting Characters/Symbols	Navigating in Documents
Open character palette ctrl ⌘	Display previous page ctrl ◀
Underscore ctrl _	Display next page ctrl ▶
Open maths template palette ⌘ ⌘	Display page sorter ctrl ▲
Clear ctrl del	Exit page sorter ctrl ▼
Caps Lock ctrl ⇧ Shift	Application-specific shortcuts
Store ctrl var	Open the Scratchpad ⌘ ⌘
Equals symbol =	Hide/show entry line ctrl G
Equality/inequality palette ctrl =	Recalculate ctrl R
Marks/letter symbol palette ?! ▶	Add function table ctrl T
Square root ctrl x²	Wizards and Templates
ans ctrl (-)	Add column to matrix ⇧ shift ↵
such that ctrl = + 	Add row to matrix ↵
Managing Documents	Integration template ⇧ shift +
Create a new document ctrl N	Derivative template ⇧ shift -
Insert new page ctrl I	Maths template palette ⌘ ⌘
Select application ctrl K	Fraction template ctrl ÷
Save current document ctrl S	Power off
Close document ctrl W	Turn handheld off ctrl ⏻ on